



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,731	08/28/2003	Yoshiaki Fukuzumi	241999US2S	5707
22850	7590	07/27/2005		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
			EXAMINER	
			ROSE, KIESHA L	
			ART UNIT	PAPER NUMBER
			2822	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b> 10/649,731	<b>Applicant(s)</b> FUKUZUMI, YOSHIAKI	
	<b>Examiner</b> Kiesha L. Rose	<b>Art Unit</b> 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

This Office Action is in response to the amendment filed 5 May 2005.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11,14,17,18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butt (U.S. Patent 4,524,238) in view of Stobbs.

Butt discloses a semiconductor package (Figs. 1 and 6) that contains a semiconductor chip (12), an enclosure which seals the chip and has a base material (16) and cap material (24) joined together by sealing material, a magnetic film (92) provided on a chip side surface of the base material and on an inner surface of the cap material so as to surround the chip. The cap is coated with a thin refractory oxide layer, which is the magnetic film. (Column 3, lines 62-65) The enclosure is ceramic where the ceramic package contains Al<sub>2</sub>O<sub>3</sub>, a leadframe comprising a die pad which the chip is mounted, an inner lead portion (22) sealed by the enclosure, an outer lead portion (23) out of the enclosure, where the inner lead portion has a stacked structure in which a plurality of conductive layers are stacked via insulating layers and the plurality of conductive layers are electrically connected to the corresponding external connection

Art Unit: 2822

electrodes on the chip by bonding wires (25). Butt discloses all the limitations except for the chip to comprise a magnetic element. Whereas Stobbs discloses a magnetic random access memory (Fig. 2) that contains a semiconductor chip (13) comprising a magnetic element, an enclosure (22) which seals the magnetic chip and substantially spherical magnetic substance particles which are interspersed in the enclosure, where the enclosure is a plastic package containing either epoxy resin or silicone resin. The semiconductor chip contains a magnetic element to function as a magnetic chip that uses magnetic charges to store bits of data. (Page 1, Paragraph 3) Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Butts by incorporating a magnetic chip to use magnetic charges to store bits of data in a magnetic random access memory device as taught by Stobbs.

Claims 12,13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butt and Stobbs and further in view of Hirai (U.S. Publication 2002/0131296).

Butt and Stobbs disclose all the limitations except for the memory element to be a tunnel magneto-resistance element. Whereas Hirai discloses a magnetic random access memory that discloses a memory chip that is a tunnel magneto-resistance element. The memory chip is a tunnel magneto-resistance element so that the electric resistance of the magnetic material is changed according to the direction of the magnetization or the existence of the magnetization for the MRAM. (Page 1, Paragraph 4) Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the devices of Butt and Stobbs by incorporating

Art Unit: 2822

the magnetic element to be a tunnel magneto-resistance element so that the electric resistance of the magnetic material is changed according to the direction of the magnetization or the existence of the magnetization for the MRAM as taught by Hirai.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stobbs.

Stobbs discloses the claimed invention except for the magnetic substance particles to have a diameter of 20 microns or less or them to occupy 1 wt% or more of the enclosure. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the magnetic substance particles to have a diameter of 20 microns or less or them to occupy 1 wt% or more of the enclosure, since it has been held that where the general condition of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. (1955)

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection. In response to the Applicant's arguments that the Butt reference does not disclose the same advantages as the present invention in regards to the magnetic film (92), the fact the Applicant uses the magnetic film for different purposes does not alter the conclusion that its use in a prior art device would be prima facie obvious from the purpose disclosed in the reference. In re Lintner, 173 USPQ 560. In regards to the Stobbs reference not disclosing the magnetic particles to

be spherical as is seen in Fig. 2, the magnetic particles are circular are therefore considered to be spherical and the drawings convey with reasonable clarity to those of ordinary skill in the art the subject matter (magnetic particles spherical). Therefore the rejection stands.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiesha L. Rose whose telephone number is 571-272-1844. The examiner can normally be reached on M-F 8:30-6:00 off 2nd Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2822

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLR  
KLR

  
Michael Trinh  
Primary Examiner  
Act SPE